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10/563,142

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Kyong-Ja Jung

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EXAMINER

ADAMS, GREGORY W

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/563,142 | Applicant(s) JUNG, KYONG-JA | |
| | Examiner GREGORY W. ADAMS | Art Unit 3652 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-9,11-22 and 24-67 is/are pending in the application.
- 4a) Of the above claim(s) 1,2,4-9 and 57-59 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-22,24-27,32-39,44-50,52-56 and 60-67 is/are rejected.
- 7) ☒ Claim(s) 28-31,40-43 and 51 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/30/05</u> . | 6) <input type="checkbox"/> Other: _____ |

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “a width of an insertion hole being **gradually increased** from a lower end to an upper end” as recited in claim 35 must be shown or the feature(s) canceled from the claim(s). (Emphasis added) FIGS. 28-31 clearly show a locking pin 251B inserted in insertion hole 252B, and it also shows that hole 252B has a constant height and width, but a hole of gradually increasing width, i.e. changes in dimension between two points, is not readily apparent. Is it a wedge shaped opening, slanted on one side, circular, i.e. it would require unreasonable experimentation as to what is meant to be shown. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Are the bogies of claim 13 the same as the bogies of claim 18? of claim 20? of claim 50? They appear to refer to different bogies, but using the same nomenclature to recite different structures is indefinite. In other words it is not clear these are referring to the same bogie. If true any indefiniteness can be traversed by reciting different nomenclature, e.g. bogie of claim 13, lifting carriage of claim 18, etc.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11-13, 24, 38-39, 44-46, 52-53, 55-56, 62-64 & 66-67 are rejected under 35 U.S.C. 102(b) as being anticipated by Young (US 3,543,952).

With respect to claims 11-12, 52-53, 55-56, 62-64, 66-67, Young '952 discloses an apparatus for storing and transferring containers, comprising:

- a loading/unloading unit 40, 42 for loading or unloading containers onto or from a container ship 56;
- a stacking unit comprising:
 - a steel frame body 26 constructed in a vertical multi-storied structure such that a steel-frame body has a plurality of stacking chambers 94a-d, 96 defined therein, a steel-frame body having horizontal rails 104 disposed at both sides in each stacking chamber and a lifting channel 108, 110 defined vertically in a steel-frame body;
 - a cage 36, 38 disposed in a lifting channel, a cage having horizontal rails 156 corresponding to horizontal rails of a stacking chamber;
 - a traveler 184 mounted in a cage such that a traveler can be attached to or detached from an upper part of a container, a traveler being movable horizontally along horizontal rails of a stacking chamber and horizontal rails of a cage; and
 - lifting parts 160 attached to an upper end of a steel-frame body for moving a cage upward or downward along a lifting channel.
- a transferring unit 50 for transferring containers between a loading/unloading unit and a stacking unit; and
- a central controlling (FIGS. 12-15) unit for receiving information of containers to be loaded onto or unloaded from a container ship from a loading/unloading unit to determine whether containers are stacked or not and to identify a

position of containers and controlling movement of a transferring unit so that containers can be handled.

With respect to claim 13, Young '952 discloses-

- railroad lines 46, 48, 260 connected between a lower part of a loading/unloading unit and a taking-in/taking-out unit via a stacking unit; and
- a plurality of automatic bogies 50, 262, movable automatically along a railroad line.

With respect to claim 24, Young '952 discloses-

- a horizontal driving part 226 including a main body disposed at a cage, and
- a plurality of driving rollers 186 rotatably disposed at both sides of a main body such that driving rollers are moved along horizontal rails of a cage while being in rolling contact with horizontal rails of a cage by means of a driving motor 226 fixed to a main body; and
- holder parts 210 formed at a lower surface of a main body such that holder parts can be engaged in or disengaged from holes 66 formed at an upper surface of a container.

With respect to claims 38-39, Young '952 discloses-

- height-adjusting parts comprising:
 - a hydraulic cylinder 196 mounted downward at a corresponding corner of the traveler;

- a spreader 187 having a corresponding holder part 210 mounted to a hydraulic cylinder piston rod 196 end to move a spreader upward or downward by means of the hydraulic cylinder; and
- a guide rod (indicated generally as 154).

With respect to claim 44, Young '952 discloses-

- a steel-frame stacking facility including a plurality of steel-frame bodies 94a-d, 96 connected to each other such that floors of one of steel-frame body communicate with floors of other steel-frame body, respectively, each steel-frame bodies having at least two stacking chambers disposed along both sides of a lifting channel, and wherein a traveler is moved horizontally from one of lifting channels to other lifting channel in steel-frame stacking facility.

With respect to claim 45, Young '952 discloses-

- an introduction-preventing part (FIGS. 12-15) for preventing a traveler provided at one lifting channel from being introduced into an other lifting channel.

With respect to claim 46, Young '952 discloses different sized stacking facility.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14-15, 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young '952 and further in view of Alsen (US 3,754,669).

With respect to claims 14-15, Young '952 discloses railroad line parts 46, 48 convergent to and from a stacking unit, and further discloses railroad line parts that intersect through a stacking unit. Alsen discloses-

- a plurality of transverse railroad line parts 39, 36, 40, 41 disposed at a lower part of a loading/unloading unit while being perpendicular to a loading/unloading unit 33;
- cross railroad line parts crossing each other, cross railroad line parts being connected to a transverse railroad line parts in pairs and arranged from transverse railroad line parts;
- convergent railroad parts extending from ends of cross railroad line parts such that a convergent railroad parts are convergent to at least one position;
- and a railroad line-rotating part 35.

Alsen teaches that in sorting containers carried by rail cars, i.e. bogies, turntables replace endless tracks such as Young's 46, 48 due to the ability to the ability to turn in opposite directions, simplicity and satisfaction in sorting efficiency as well as endless sorting possibilities between any number of destinations and originations. C5-6.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Young '952 to add a railroad line-rotating part, as per the teachings of Alsen, to improve on sorting of containers traveling along endless bogie railroad line parts.

With respect to claim 18, Young' 952 discloses a loader 262 for loading a container moved by means of an automatic bogie above a section where a convergent railroad parts are convergent according to a control of a central controlling unit onto a trailer.

With respect to claim 19, Young' 952 discloses-

- a loader frame 262 mounted above convergent ends of a convergent railroad parts;
- a moving bogie 265 movable along a loader frame 260;
- a plurality of holder parts 264 attached to a moving bogie for holding a container; and
- a loader driving part 265 electrically connected to the central controlling unit for driving the moving bogie.

Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young '952 and further in view of Alsen and further in view of Roe Woodruff (US 1,703,978). Young '952 does not disclose a railroad line rotating part. As noted above under claim 15 Alsen discloses a

- a circular table 35 disposed at a section where cross railroad line parts cross each other and at a section where convergent railroad parts are convergent, a circular table having connection railroad line parts 43 disposed on an upper surface thereof, a connection railroad line parts being connected to a cross railroad line parts and convergent railroad parts.

Roe Woodruff discloses a railroad line rotating part comprising-

- a circular table 5-8 disposed at a section where cross railroad line parts cross each other and at a section where convergent railroad parts are convergent, a circular table having connection railroad line parts 43 disposed on an upper surface thereof, a connection railroad line parts being connected to a cross railroad line parts and convergent railroad parts.
- a rotary shaft 43 mounted to a center of a lower surface of a circular table 5-8;
- a base 4 for rotatably supporting a lower end of a rotary shaft;
- a rotary driving part 77 electrically connected to a central controlling unit for rotating a circular table;
- annular supporting protrusions 9 attached to a lower surface of a circular table such that a supporting protrusion is disposed around a rotary shaft while being spaced apart from a rotary shaft, and wherein a plurality of supporting rollers are rotatably attached to the lower surface of the supporting protrusions.

Alsen adds a turn table due to the ability to the ability to turn in opposite directions, simplicity and satisfaction in sorting efficiency as well as endless sorting possibilities between any number of destinations and originations. C5-6. And Roe Woodruff adds the missing components of Alsen as is well known in railroad switching turntables. All of the component parts are known in Alsen and Roe Woodruff. The only difference is the combination of the "old elements" into a single device by adding a shaft, base, annular supporting protrusions and rotary driving part. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify

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turntable of Alsen to include the structure from Roe Woodruff, since the operation of the Young's bogie, i.e. railroad car, is in no way dependent on the operation of the other equipment turntable, and shaft, protrusions, rollers and rotary driving part could be used to achieve the predictable result of rotating large and heavy vehicles such as railroad cars as is disclosed in both Young and Alsen.

Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young '952 and Alsen and further in view of Fantuzzi (US 5,951,226). Young '952 discloses an automatic bogie 50 comprising-

- a rectangular frame-shaped bogie body;
- a plurality of bogie shafts rotatably mounted to a lower part of the bogie body;
- bogie wheels 302 securely fixed to both ends of each bogie shaft;
- bogie driving parts 304;
- a bogie control part (C9/L1-35) for controlling a bogie driving part; and

Fantuzzi et al. disclose wireless transceivers are a design replacement for Young's inductive guidance (C4/L45). Fantuzzi et al. disclose a self-propelled bogie 118 with a wireless transceiver 121 and protrusions, as is as well known design change to skilled artisans. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Young '952 to include wireless transceiver, as per the teachings of Fantuzzi et al., as is a well known design change.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Young '952, Alsen and Fantuzzi and further in view of Dobner (US 6,698,990). Dobner

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discloses battery-operated bogies 49 to ensure low-disruption operation during loading/unloading. C2/L40-64. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the bogie of Young '952 to include batteries, as per the teachings of Dobner, to ensure low disruption operation.

Claims 25-27, 32-37, 54, 60, 61, 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young '952 in view of Albert Sahlin (US 2,316,976) and Sanders (US 2,848,069).

With respect to claims 25, 32-33, 35, 37, 54, 60, 61, 65, Sahlin discloses locking parts for locking a cage to a steel-frame body at a position where horizontal platform of a raising and lowering cage is level with a corresponding floor of particular level in a vertically storage array. Specifically, Sahlin discloses

with respect to 32:

- a movable locking part including an actuating mechanism mounted to a cage and an insertion rod 28 integrally attached to an actuating mechanism end such that an insertion rod can be moved forward from or backward to a cage by means of an actuating mechanism; and
- a locking insertion part formed at a steel-frame body corresponding to a stacking chamber for securely locking the insertion rod.

with respect to 33, 35:

- a locking member 28 attached to an upper end of a stacking chamber corresponding to the lifting channel; and

- an insertion hole 21 formed at a locking member for allowing an insertion rod to be inserted therethrough, wherein an insertion hole is a vertically extending elongated hole, a width of an insertion hole being gradually increased from a lower end to an upper end of the insertion hole such that a width of the hole at the upper end of the insertion hole is larger than a diameter of an insertion rod.

With respect to claim 37:

- a sliding tube 30, 31 surrounding an insertion rod such that an insertion rod can be slid through a sliding tube; and
- a supporting bar 34, 35 attached between a sliding tube and a cage.

Albert Sahlin teaches such that when lifting extra heavy loads a locking device provides extra supporting independent of a hoisting device to prevent an elevator from untended elevator lowering. C1. Sanders discloses a movable locking part including an actuating cylinder 30 mounted to a cage and an insertion rod integrally attached to a piston rod end such that an insertion rod can be moved forward from or backward to a cage by means of an actuating cylinder. Sanders is also directed to elevator safety with the intent on leveling elevators at several delivery levels such as in freight elevators where fine motor control is not accurate enough in precise positioning. Thus, Albert Sahlin discloses a locking device and does not disclose an actuating cylinder. Sanders discloses an actuating cylinder. Because Albert Sahlin and Sanders disclose apparatus' directed to the result of elevator positioning relative to vertical delivery levels during lifting of heavy loads locking it would have been obvious to one having ordinary skill in

the art at the time the invention was made to substitute the structure of Sanders to include the missing structure of Albert Sahlin to achieve the predictable result of precise elevator positioning.

With respect to claim 26, Young '952 discloses

- a hydraulic motor 164 mounted to a upper end of the steel-frame body;
- a driving pulley 162 that can be operated by means of a hydraulic motor; and
- wire ropes 160 connected to a cage such that wire ropes can be wound by means of a driving pulley.

With respect to claim 27, Young '952 discloses vertically disposed guide rails 176 are vertically disposed along a lifting channel, and a plurality of rollers 174 are rotatably attached to an outside of a cage such that rollers can be in contact with guide rails.

With respect to claims 34, 36, Albert Sahlin teaches such that when lifting extra heavy loads a locking device provides extra supporting independent of a hoisting device to prevent an elevator from unintended elevator lowering. C1. Sanders discloses

- a guide member 48' attached to the upper end of the stacking chamber corresponding to a lifting channel; and
- a wedge-shaped groove 50 formed at a guide locking member; and
- a roller 24 rotatably attached to an insertion rod end.

Sanders teaches freight elevator safety intent on leveling elevators at several delivery levels such as in freight elevators where fine motor control is not accurate enough in precise positioning. Thus, Albert Sahlin discloses a locking device and does not a roller and wedge which are disclosed in Sanders. Because Albert Sahlin and Sanders

disclose apparatus' directed to the result of elevator positioning relative to vertical delivery levels during lifting of heavy loads locking it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the structure of Sanders to include the missing structure of Albert Sahlin to achieve the predictable result of precise elevator positioning.

Claims 47-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young '952 in view of Allen (US 4,955,489). Allen discloses rubber safety protrusions 62 and pairs of stop brackets 32 "so as to position the carts 32 and 34 in their forward position approximately immediately adjacent to the front shelf 15 of the storage bay." C5. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Young '952 to include rubber safety protrusions and pairs of stop brackets, as per the teachings of Allen, to position carts, i.e. bogies, at précis positions along rail members.

Allowable Subject Matter

Claims 28-31, 40-43 & 51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREGORY W. ADAMS whose telephone number is (571)272-8101. The examiner can normally be reached on M-Th, 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saul Rodriguez can be reached on (571) 272-7097. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gregory W Adams/
Primary Examiner, Art Unit 3652